

Serial No. **10/696,997**

Docket No. **P-0588**

Reply to Office Action dated February 22, 2007

AMENDMENT TO THE ABSTRACT

Please replace the original Abstract with the Substitute Abstract filed herewith. No new matter is added.



ABSTRACT

An initial synchronization searching apparatus and method in a mobile communication system are disclosed. Correlation is not performed on an entire input signal but on a specific region of an input signal. Accordingly, complicate calculations required for the initial synchronization of the TD-SCDMA or the UMTS-TDD terminal can be considerably reduced. The initial synchronization searching method includes: accumulating input signals for several frames; taking an absolute value of the accumulated value; and searching a region with a high power distribution having a certain length from the absolute value of the input signal, selecting it as a candidate region and searching for synchronization in the selected candidate region.